

Claims:

1. A method for serially aligning database transactions comprising at least two databases coupled to their associated database management systems, comprising steps, in which

- 5 - the first transaction is initiated in the first database,
- at least one transaction trigger including attributes is linked into said first transaction,
- said first transaction is ended in the first database,

10 is **characterized** in that, it further comprises step, in which at least one said trigger is fired in at least one first database and at least one second transaction is initiated in the first database to invoke a remote database operation in at least one second database according to at least some of the attributes in the trigger.

2. A method according to claim 1 , **characterized** in that the said trigger is a deferred database operation defined for at least one data manipulation operation.

15 3. A method according to claim 1, **characterized** in that the execution of the second transaction is blocked until the said trigger fires.

4. A method according to claim 1, **characterized** in that, wherein a database system comprises at least one master database and at least one replica database, the data synchronization between the master and replica databases is master-initiated.

20 5. A method according to claim 1, **characterized** in that the transactionally consistent set of data in a database comprises configuration data.

6. A method according to claim 5, **characterized** in that the device changes its configuration to reflect the changed data right after the data has committed in the database.

25 7. A method according to claim 1, **characterized** in that the related software processes, like other database server or a client application, are informed about transactional changes by the data management server.

8. A method according to claim 1, **characterized** in that the method executes tasks and operations in a database transaction context.

9. A method according to claim 1, **characterized** in that, any of the said transactions are executed in separate database connections or in a shared connection with another said transaction or another transaction.

5 10. A method according to claim 1, **characterized** in that the method is compatible with at least one of the following communication specifications: TCP/IP, CDMA, GSM, HSCSD, GPRS, WCDMA, EDGE, UMTS, Bluetooth, Teldesic, Iridium, Inmarsat, WLAN, DIGI-TV and imode.

10 11. A method according to claim 1, **characterized** in that the method is compatible with at least one of the following operating systems and is used in at least one terminal including an application, replica database of the database system Unix, MS-Windows, EPOC, NT, MSCE, Linux, PalmOS, GEOS, VxWorks, Pocket PC and any upgrade of these.

15 12. A method according to claim 1, **characterized** in that at least one of the following operating systems is used in at least one server including an application master database of the database system: Unix, MS-Windows, VxWorks, NT and Linux and any upgrade of these.

13. A method for serially aligning database transactions comprising at least two databases coupled to their associated database management systems, comprising steps, in which

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- the first transaction is initiated in the first database,
 - at least one transaction trigger including attributes is linked into said first transaction,
 - said first transaction is ended in the first database,

25 is **characterized** in that, it further comprises step, in which at least one said trigger is fired in at least one first database and at least one second transaction is initiated to synchronize data in at least one second database from at least one first database according to at least some of the attributes in the trigger.

30 14. A method according to claim 13, **characterized** in that the set of data of the second transaction comprises data for performing push-style or push-pull -style synchronization.

15. A method according to claim 13, **characterized** in that the said trigger is a procedure call defined for at least one data manipulation operations.
16. A method according to claim 13, **characterized** in that the execution of the second transaction is blocked until the said trigger fires.
- 5 17. A method according to claim 13, **characterized** in that, wherein a database system comprises at least one master database and at least one replica database, the push synchronization data between the master and replica databases is master-initiated and pull synchronization data between the master and replica databases is replica-requested.
- 10 18. A method according to claim 13, **characterized** in that the transactionally consistent set of data in a database comprises system configuration data.
19. A method according to claim 18, **characterized** in that the device changes its configuration to reflect the changed data right after the data has committed in the database.
- 15 20. A method according to claim 13, **characterized** in that the related software processes, like other database server or a client application, are informed about transactional changes by the data management server.
21. A method according to claim 13, **characterized** in that the method executes tasks and operations in a database transaction context.
- 20 22. A method according to claim 13, **characterized** in that the method is compatible with at least one of the following communication specifications: TCP/IP, CDMA, GSM, HSCSD, GPRS, WCDMA, EDGE, UMTS, Bluetooth, Teldesic, Iridium, Inmarsat, WLAN, DIGI-TV and imode.
23. A method according to claim 13, **characterized** in that the method is compatible with at least one of the following operating systems and is used in at least one terminal including an application, replica database of the database system Unix, MS-Windows, EPOC, NT, MSCE, Linux, PalmOS, GEOS, VxWorks, Pocket PC and any upgrade of these.
- 25 24. A method according to claim 13, **characterized** in that at least one of the following operating systems is used in at least one server including an application master database of the database system: Unix, MS-Windows, VxWorks, NT and Linux and any upgrade of these.
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25. A method according to claim 13, **characterized** in that, any of the said transactions are executed in separate database connections or in a shared connection with another said transaction or another transaction.

5 26. An arrangement for serially aligning database transactions comprising at least two databases and the associated database management system, comprising means for linking at least one transaction trigger including attributes into the first transaction in the first database, **characterized** in that, the arrangement further comprises means for initiating at least one second transaction to push data into at least one second database according to at least some of the attributes in the trigger after said
10 first transaction is ended in the first database and thereafter said trigger is fired in at least one first database.

27. An arrangement according to claim 26, **characterized** in that it comprises at least one master database and one replica database coupled to associated database management systems.

15 28. An arrangement according to claim 26, **characterized** in that the transactionally consistent set of data in a database comprises system configuration data.

29. An arrangement according to claim 26, **characterized** in that at least the second database can be part of a router coupled to the application.

20 30. An arrangement according to claim 26, **characterized** in that a storage medium is a memory and/or a disk.

31. An arrangement according to claim 26, **characterized** in that the arrangement and/or database system is compatible with at least one of the following communication specifications: TCP/IP, CDMA, GSM, HSCSD, GPRS, WCDMA, EDGE, UMTS, Bluetooth, Teldesic, Iridium, Inmarsat, WLAN, DIGI-TV and imode.

25 32. An arrangement according to claim 26, **characterized** in that at least one of the following operating systems and is used in at least one terminal including an application, replica database of the database system Unix, MS-Windows, EPOC, NT, MSCE, Linux, PalmOS, GEOS, VxWorks, Pocket PC and any upgrade of these.

30 33. An arrangement according to claim 26, **characterized** in that at least one of the following operating systems is used in at least one server including an application master database server and/or the schema management node: Unix, MS-Windows, VxWorks, NT and Linux and any upgrade of these.

34. An arrangement for serially aligning database transactions comprising at least two databases and the associated database management system, comprising means for linking at least one transaction trigger including attributes into the first transaction in the first database, **characterized** in that, the arrangement further comprises means for initiating at least one second transaction to synchronize data in at least one second database from at least one first database according to at least some of the attributes in the trigger after said first transaction is ended in the first database and thereafter said trigger is fired in at least one first database.
35. An arrangement according to claim 34, **characterized** in that the set of data comprises data of push or push-pull synchronization.
36. An arrangement according to claim 34, **characterized** in that it comprises at least one master database and one replica database coupled to associated database management system.
37. An arrangement according to claim 34, **characterized** in that the transactionally consistent set of data in a database comprises system configuration data.
38. An arrangement according to claim 34, **characterized** in that at least the second database can be part of a router coupled to the application.
39. An arrangement according to claim 34, **characterized** in that a storage medium is a memory and/or a disk.
40. An arrangement according to claim 34, **characterized** in that the arrangement and/or the database system is compatible with at least one of the following communication specifications: TCP/IP, CDMA, GSM, HSCSD, GPRS, WCDMA, EDGE, UMTS, Bluetooth, Teldesic, Iridium, Inmarsat, WLAN, DIGI-TV and imode.
41. An arrangement according to claim 34, **characterized** in that at least one of the following operating systems is used in at least one terminal including an application, replica database of the database system Unix, MS-Windows, EPOC, NT, MSCE, Linux, PalmOS, GEOS, VxWorks, Pocket PC and any upgrade of these.
42. An arrangement according to claim 34, **characterized** in that at least one of the following operating systems is used in at least one server including an application master database server and/or the schema management node: Unix, MS-Windows, VxWorks, NT and Linux and any upgrade of these.